# OFFICE OF PERSONNEL MANAGEMENT

———————————

# Sample Questions:
# Preparation for the Apprentice Examination

The tests used in the apprentice examination are in a multiple-choice format. If you have taken tests for entry into the military service or for counseling and/or job placement by your State Employment Service, you have taken tests similar to these.

These tests were designed to be basic ability tests. There are no tricks; all material covered by a test is described in this material and in the directions given at the time you take the tests. These tests were designed specifically for trade-related fields. If you can honestly say that you can comfortably handle the kinds of questions illustrated by the sample questions, then you should expect to do well on these tests. If you encounter anything that seems confusing on the tests, keep in mind that you may be able to handle the material and there is no need for alarm. Try to have confidence in your abilities; there is no need to experience severe anxiety when taking these tests. If there are topic areas in which you know that you are weak, you should not expect to handle these areas well on the tests without first strengthening your skills in these areas. This can be done by practicing with similar test materials from commercial study guides or by studying the topics involved.

There are a number of books and study guides available commercially for additional practice with some of the kinds of material given in these tests. While we cannot endorse any of these texts, potential test takers may find them useful. These books should be carefully selected; those selected should include books on reading efficiency. Reading is the one question type least susceptible to improvement by practice and therefore more work is required to improve one's score on this question type. Also, since there are many questions on basic mathematics, careful study of good textbooks on arithmetic, basic algebra, and elementary geometry can be of assistance.

Following are examples of these tests.

## 1. GROSS DEXTERITY TEST

This is an easy test of dexterity, or skill with your hands. (some other dexterity tests are harder.) In the examination room you will use a while answer sheet section for a test like this. In this test you will find a list of numbers and letters you are to mark on your answer sheet. You are to go straight down the list, finding each number on the answer sheet and marking the space for the letter that is shown with it. This test will help you to find the numbers quickly, when you are working on a real test.

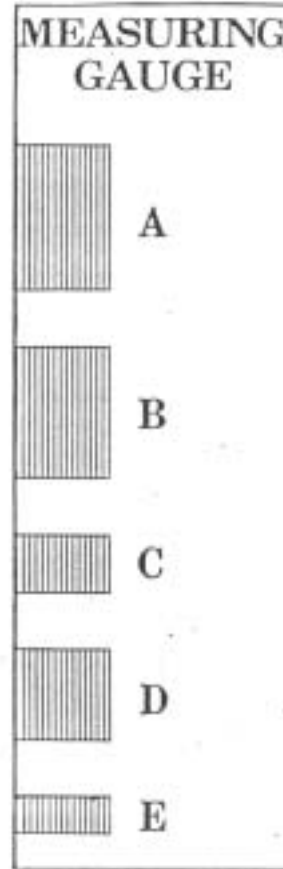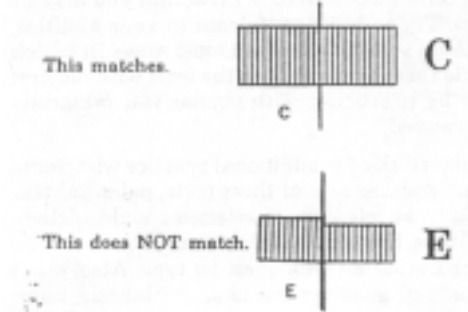Mark these questions on the sample answer sheet below.
53. C  58. E  59. B  57. D  55. B  54. A  56. D  60. B

## 2. ALIGNMENT DEXTERITY

This test gives you a chance to show speed and accuracy. You do so by using a measuring gauge to check the height of rectangles. (The measuring gauge you use is like the one printed at the right. For the test, it will be a separate piece of paper that you compare with the rectangles of the test questions.)

You check only the height – the space between the *heavy* lines. The thin lines are to help you line up the measuring gauge, which also has thin lines. In every question, *four* of the lettered rectangles match the spaces with the same letters on the measuring gauge. One lettered rectangle does not match. This one is the answer.

This matches.    C

This does NOT match.    E

MEASURING GAUGE

A

B

C

D

E

Sample Answer Sheet

Correct Answers to Sample Questions

The two questions below show how you line up a measuring gauge rectangle with a question rectangle to check the height. The measuring gauge has been darkened to make it stand out. Notice that in 1, E is larger than measuring gauge rectangle E.

2
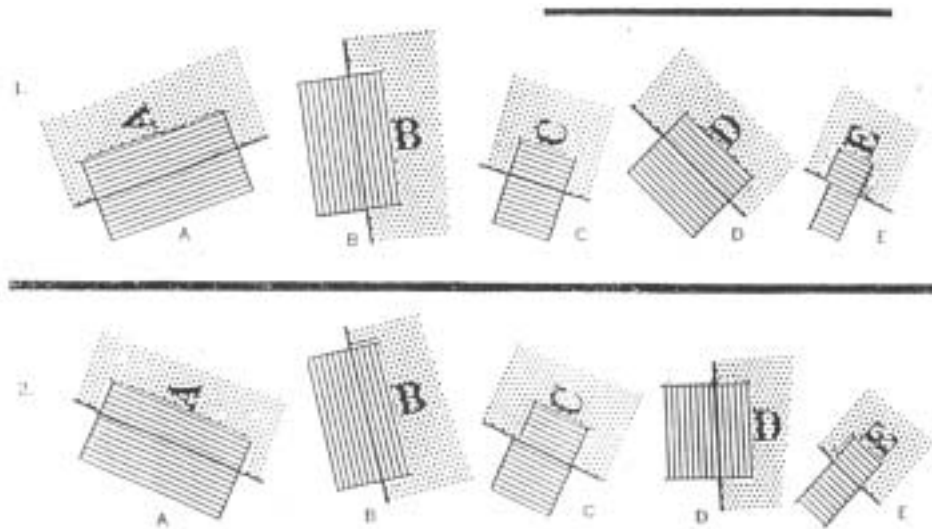
## 3. FOLLOWING ORAL DIRECTIONS

In this test the examiner will read directions aloud, and you will mark your answer sheet as directed. You must listen carefully and try to work quickly. The reading will be timed carefully so that everyone will have the same time to write the answers. The sample answer sheet has been marked to show how it would look after following all these instructions:

"Mark E for 82, 83, 85, (slight pause) 78, and 102. (Pause.)

"Mark C for 107, 110, and 103. (Pause.)

"Mark D as in dog for 101,110, (slight pause) 76, and 85. (Pause.)

"For the remainder of the questions, mark space E and also make the letter I call, unless E is already marked. If E is already marked for that number, do not make any mark for that number.

"Mark B as in boy for 106, 78, (slight pause) 80, and 84. (Pause.)

[Do you understand why B was not marked for 78? Read the instructions again to see why.]

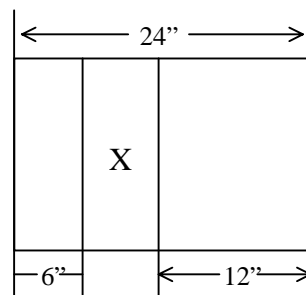"Mark A for 108, 104, 83, and 109. (Pause.)

"Mark C for 79, 102, (slight pause) and 77."



Sample Answer Sheet



Correct Answers to Sample Questions

## 4. SHOP ARITHMETIC
Nearly every job needs some arithmetic. Sometimes you have to figure the size of a piece of wood or sheet metal, and you need to know fractions.



1. In the above figure the percentage of the whole sheet represented by the part labeled X is
   A) 16 2/3 %
   B) 20%
   C) 25%
   D) 33 1/3 %
   E) none of these

2. ½ of ¼ is

    A) 1/12
    B) 1/8
    C) ¼
    D) ½
    E) 8

3. A drawing of certain large building is 10 inches by 15 inches. On this drawing 1 inch represents 5 feet. If the same building had been drawn 20 inches by 30 inches, 1 inch of the drawing would represent

    A) 2 ½ feet
    B) 3 1/3 feet
    C) 5 feet
    D) 7 ½ feet
    E) 10 feet

4. Divide: $27\overline{)4379.4}$

    A) 160.2
    B) 160.22
    C) 1,620.2
    D) 1,622
    E) none of these

5. An opening 6 yards long and 3 feet wide is to be covered by sheathing. Enough lumber is available to cover two-thirds of the area of the opening. How many square feet will remain uncovered?

    A) 2
    B) 4
    C) 6
    D) 12
    E) none of these



4
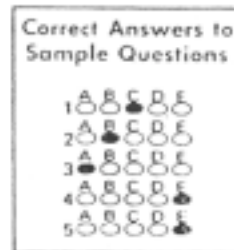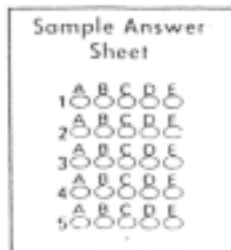
## 5. READING COMPREHENSION

The reading comprehension items in this test are samples of trade-related reading material. The samples come from a wide variety of trades and are designed and worded so that they can be understood by any reasonably well prepared applicant regardless of trade-related interest and/or experience. Thus, the test taker whose interest, for example, is painting should not be alarmed or distracted by an item on electronics. The electronics item will be so clear that no prior electronics experience or training will be needed to answer the question.

For those who are not familiar with trade-related reading or who have not read any trade material recently, practice reading and answering questions on any *elementary* trade material is suggested; this practice is suggested to give the applicant a sense of comfort with such reading.

*Reading passage*

---

*Water Contamination.* Water is a serious contaminant of hydraulic systems. Hydraulic fluids are adversely affected by water. Water may result in the formation of ice and the corrosion of metallic surfaces. Water may be condensed from air entering vented systems. When it separates shall be taken to remove all free or emulsified water from hydraulic systems.

If water in the system results in the formation of ice, fluid flow and valve operation will be impeded. This is particularly true of water located in system extremities and subjected to high-altitude, low-temperature conditions. Micro-organisms may grow and spread in hydraulic system performance.

---

Questions

1. Which of the following actions should be taken regarding water contamination of hydraulic systems?

   A) Add emulsified water to the system.
   B) Remove all free water.
   C) Add distilled water to the system.
   D) Remove filters
   E) Collected water in filter bowls.

2. Which of the following occurs as a result of ice formation in hydraulic systems?

   A) emulsified water
   B) condensation from air in vented systems
   C) slowed valve operation
   D) increased fluid flow
   E) none of the above



Sample Answer Sheet

Correct Answers to Sample Questions

## 6. BASIC ALGEBRA and ARITHMETIC PROBLEMS

For almost all apprentice jobs, the ability to solve simple algebra and arithmetic problems is required. In this test part, questions are given which ask you to solve simple percentage, proportion, ratio, algebra geometry, and graph problems. For the geometry problems, the necessary formulas are given in the test booklet. Some examples of these questions are:

1. A circular saw cuts 8 boards per minute. If there are 1,440 boards to be cut, the number of *hours* required to cut these boards is
   A) 2 1/3
   B) 3
   C) 4
   D) 3 2/3
   E) 2 2/3X

2. If $3X = \dfrac{X}{2} + 10$, then the value of X is

   A) 2
   B) 2 ½
   C) 4
   D) 5
   E) 10
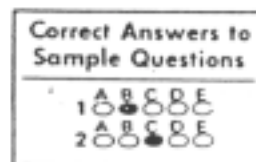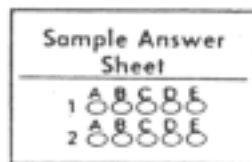


## 7. TABLE READING and FOLLOWING WRITTEN INSTRUCTIONS

This test is speeded test. You are to quickly follow simple written instructions on how to look up a number for an object in the table. An example follows:

As to chemical composition, Alloy 7075 is approximately 90% aluminum. The table below shows its additional elements and also those of Alloy 2024.

| ELEMENT | ALLOY 7075 | ALLOY 2024 |
|---|---|---|
| Zinc | 5.6% | – |
| Copper | 1.6% | 4.5% |
| Magnesium | 2.5% | 1.5% |
| Chromium | 0.3% | – |
| Manganese | 0.2% | 0.6% |

1. Other than Aluminum, Alloy 7075 has more than 4% of which one of the following elements?
   A) Zinc
   B) Copper
   C) Magnesium
   D) Chromium
   E) none of the above

2. Other than Aluminum, Alloy 2024 has more than 4% of which one of the following elements?
   A) Zinc
   B) Copper
   C) Magnesium
   D) Chromium
   E)  none of the above
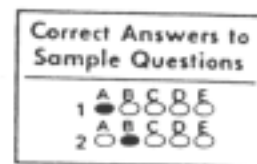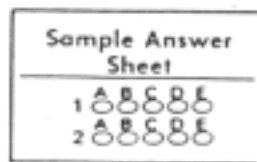


## 8. SPATIAL ABILITY

The ability to understand drawings of solid objects and to find small differences between drawings is useful when your job requires you to read blueprints or to understand the pictures in an instruction book. There are several kinds of questions to test spatial ability.

In questions 1 and 2 the flat pieces shown at the left can be arranged to make one of the figures shown in the row on the right. The pieces can be turned around or turned over, but they must fit together edge to edge without overlapping.
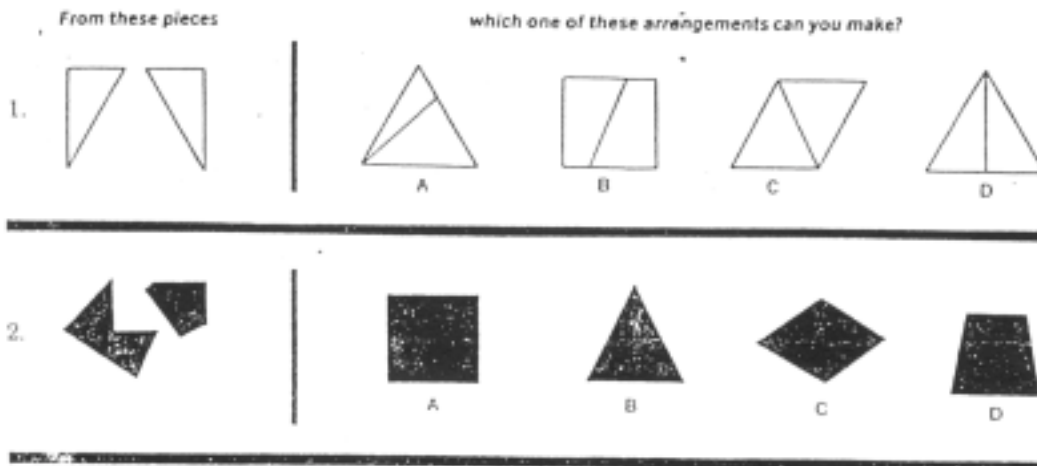
## 9. PERCEPTION

Other questions that use pictures can test your ability to see differences between several objects that are almost exactly alike.

1. Which of the drawings is different from the other four?



Sample Answer Sheet

Correct Answers to Sample Questions